

Answer Key

1. 1737
2. 2075
3. 2088
4. 2889
5. 3906
6. 4800
7. A=1, B=4
8. A=2, B=5
9. A=3, B=6
10. A=2, B=9
11. 8 R 2
12. 5 R 3
13. 22 & 1 (remainder)
14. 26 R 1
15. 16 R 2
16. 8
17. 1.32
18. 2.52
19. 1.72
20. 3.27
21. 41.76
22. 2.508
23. 8.091
24. 8.714
25. 70.038
26. 0.5
27. 0.25
28. 0.75
29. 0.125
30. 0.375
31. $\frac{75}{100} \xrightarrow{\div 5} \frac{15}{20} \xrightarrow{\div 5} \frac{3}{4}$
32. $0.8 = \frac{4}{5} = 4/5$
33. $0.24 = \frac{24}{100} = \frac{6}{25} = 6/25$
34. $0.25 = \frac{25}{100} = \frac{1}{4} = 1/4$
35. $0.36 = \frac{36}{100} = \frac{9}{25} = 9/25$
36. A
37. C
38. A
39. C
40. C
41. 5
42. 4
43. 15
44. 2
45. 12
46. 5
47. 15
48. 2
49. 4
50. 20
51. $\frac{1}{2}(19 + 23) = 21$
52. $\frac{1}{2}(80 + 90) = 85$
53. $60+66+69 = 195$
 $195 \div 3 = 65$
54. $174 \div 3 = 58$ marbles
55. $4 \times 4.25 = \$17$
56. $21.91 - 4 \times 3.5 = \$7.91$
57. $\frac{40+2}{2} = 21$ (Dana)
58. $\frac{120-20}{2} = 50$
59. $60+66+69 = 195$
 $165 \div 3 = 65$
60. D
61. 50
62. 20
63. 15
64. 7
65. 30

Answer Key

1. 0.91
2. 2.34
3. 2.55
4. 3.45
5. 1.97
6. 41.76
7. 2.508
8. 8.091
9. 8.714
10. 70.038
11. 432
12. 392
13. 702
14. 756
15. 870
16. 408
17. 560
18. 713
19. 768
20. 3404
21. 26
22. 23
23. 18 & 2 (remainder)
24. 50 & 1 (remainder)
25. 75 & 2 (remainder)
26. 4.6
27. 1.5
28. 5.875
29. 5.125
30. 1.375
31. $7 \times 2 = 14$, $14 + 1 = 15$, so $7\frac{1}{2} = \frac{15}{2}$
32. $16 \div 3 = 5$ R 1, so $\frac{16}{3} = 5\frac{1}{3}$
33. $1 = \frac{6}{6}$ $\square = 6$
34. $2 = 1\frac{5}{5}$ $\square = 5$
35. $6 = 4\frac{6}{3}$ $\square = 6$
36. $2 \times 7 = 14$
37. $9 \times 7 = 63$
38. $100 \times 3.60 / 120 = 3$
39. (a) $12 \times (5/6) = 10$
(b) $(2+5/6) \times 12 = 34$
40. A
41. (a) $32/8 = 4$
(b) $21/7 = 3$
42. $45 \times \frac{8}{9} = 40$
43. (a) 25.12 inches
(b) 50.24 sq. inches
44. (a) 0.628 inches
(b) 0.0314 sq. inches
45. $90 - 55 = 35$
46. $54 \times \frac{2}{9} = 12$
47. $3 \times 55 = 165$
48. (a) $300 / (9 + 1) \times 9 = 270$
(b) $300 / (9 + 1) = 30$
49. (a) $(26 - 4) / 2 = 11$
(b) $(26 + 4) / 2 = 15$
50. (a) $63 \times 2 / (2 + 7) = 14$
(b) $63 \times 7 / (2 + 7) = 49$
51. $(2 \times 16 - 27) = 5$
52. $2 \times 11 - 8 = 14$
53. (a) $6 / 2 = 3$
(b) $3 \times (6 / 2) = 9$
54. (a) $(49 + 5) / 2 = 27$
(b) $(49 - 5) / 2 = 22$
55. $140 - 58 = 82$
56. $3 + 1 = 4$
 $48 \div 4 = 12$ (Nathan)
 $12 \times 3 = 36$ (Mark)
57. 13 yrs old (son) & 43 yrs old (father)

Father	Son
60	30
17 years ago	
43	13

58. $50 \div (4 + 1) = 10$ (E in 8 years)
 $10 \times 4 = 40$ (F in 8 years)
(a) $10 - 8 = 2$ (E now)
(b) $40 - 8 = 32$ (F now)
59. $4 \times 5 \times 6 \times 12.5 = 15 \times 8 \times 12.5 = 15 \times 100$
 $= \underline{\$1500}$
60. $3 \times 0.8 + 2 \times 0.95 + 2.5 = 2.4 + 1.9 + 2.5 = 6.8$
 $10 - 6.8 = \underline{\$3.20}$
61. $2,000 \div 4 = 500$
62. $4 \times 500 = 2,000$ packages
63. C
64. A

MAP 245 (T2) Issue 8

65. $1+3+2+4+7+1 = 18$

$18 \div 6 = 3$

$3 \times 500 = 1,500$

66. 15

67. 30

68. 18

69. 8

70. 40

Answer Key

1. 1141
 2. 1308
 3. 1519
 4. 2135
 5. 2919
 6. 4332
 7. A=4, B=1
 8. A=2, B=6
 9. A=4, B=6
 10. A=6, B=6
 11. 3 & 4 (remainder)
 12. 9 & 2 (remainder)
 13. 14 & 2 (remainder)
 14. 13 R 3
 15. 15 R 1
 16. $170-61 = 109$
 17. $6 \times 7 = 42$
 18. (a) $6 \times 2 = 12$
(b) $7 \times 2 = 14$
(c) $2 \times 8 = 16$
 19. (a) $60 \times (3/4) = 45$
(b) $60 \times (3/4) = 45$
 20. $10.00 - 2 \times 4.50 = 1$
 21. $(16+34)/2 = 25$
 22. D
 23. (a) $28/4 = 7$
(b) $32/8 = 4$
 24. (a) 52 (b) 38 (c) H
 25. (a) $63 \times (8/9) = 56$
(b) $63 \times (1 - 8/9) = 7$
 26. $90 - 55 = 35$
 27. $2 \times 8/8 = 2$
 28. (a) $5+2+5 = 12$
(b) $5 \times 2 \times 5 = 50$
 29. $21 \times \frac{2}{7} = 6$
 30. $50 \times 2 = 100$
 31. $2 \times 30 = 60$
 32. (a) $320/(7+1) \times 7 = 280$
(b) $320/(7+1) = 40$
 33. (a) $78 \times 4/(4+9) = 24$
(b) $78 \times 9/(4+9) = 54$
 34. $(2 \times 50 - 69) = 31$
 35. $6 \times (12/9) = 8$
 36. 0.92
 37. 3.93
 38. 1.17
 39. 2.98
 40. 4.28
 41. 5.523
 42. 70.56
 43. 7.131
 44. 24.38
 45. 3.2
 46. $1 \frac{1}{2}$
 47. $2 \frac{3}{4}$
 48. $1 \frac{1}{4}$
 49. $4 \frac{4}{5}$
 50. $4 \frac{3}{5}$
- $$\begin{array}{r} 5 \ .2 \ 5 \\ 4 \)2 \ 1 \ .0 \\ \underline{2 \ 0} \\ 1 \ 0 \\ \underline{8} \\ 2 \ 0 \\ \underline{2 \ 0} \\ 0 \end{array}$$
51. $\frac{21}{4} = 5.25$
 52. $5.25 = 5 \frac{25}{100} = 5 \frac{1}{4}$
 53. $8.12 = 8 \frac{12}{100} = 8 \frac{3}{25} = 8 \frac{3}{25}$
 54. $9.8 = 9 \frac{8}{10} = 9 \frac{4}{5}$
 55. $10.24 = 10 \frac{24}{100} = 10 \frac{6}{25} = 10 \frac{6}{25}$
 56. $0.3 = \frac{3}{10} = 3/10$
 57. $0.3 = \frac{6}{10} = \frac{3}{5} = 3/5$
(Remember to reduce it to the lowest terms.)
 58. $\frac{25}{100} = \frac{1}{4} = 1/4$
Reduce your result.
 59. $6.3 - 4.75 = \boxed{1.55 \text{ cm more}}$
 60. $\frac{3}{8} + \frac{1}{4} + \frac{1}{16} = \frac{11}{16} = 11/16$
 61. $21 + 3 = 24$ (Quin)
 $24 \div 3 = 8$ (Rachel)
 62. $4.50 \times 2 = 9$
 $2 \times 9 = 18$
 $20 - 18 = \$2$
 63. $\frac{1}{3} \times 5280 = 1760$ feet
 64. $10 - 3 \times 2.5 = 10 - 7.5 = \2.50

MAP 245 (T2) Issue 9

65. $100 + 8 \times 60 = \$580$

66. $\Delta \div 7 = 12 \Rightarrow \Delta = 84$

67. $\square \times 4 = 28 \Rightarrow \square = 7$

68. $\square \div 4 = 28 \Rightarrow \square = 112$

69. $\square + 12 = 17 \Rightarrow \square = 5$

70. $2 \times \square + 3 = 15 \Rightarrow 2 \times \square = 12 \Rightarrow \square = 6$

71. 18

72. 40

73. 12

74. 60

75. 9

Answer Key

1. 1328
2. 1748
3. 1752
4. 2464
5. 3344
6. 3312
7. A=3, B=8
8. A=5, B=3
9. A=7, B=3
10. A=6, B=8
11. 18 & 1 (remainder)
12. 13
13. 13 & 2 (remainder)
14. 8 & 4 (remainder)
15. 12 & 1 (remainder)
16. $200 - 69 = 131$
17. $6 \times 7 = 42$
18. (a) $7 \times 2 = 14$
(b) $8 \times 2 = 16$
(c) $2 \times 9 = 18$
19. (a) $60 \times (3/4) = 45$
(b) $60 \times (3/4) = 45$
20. $20.00 - 2 \times 5.50 = 9$
21. $(34 + 26) / 2 = 30$
22. D
23. (a) $35 / 5 = 7$
(b) $35 / 5 = 7$
24. (a) 37 (b) 53 (c) J
25. (a) $12 \times (3/4) = 9$
(b) $12 \times (1 - 3/4) = 3$
26. $90 - 57 = 33$
27. $2 \times 9 / 6 = 3$
28. (a) $6 + 3 + 3 = 12$
(b) $6 \times 3 \times 3 = 54$
29. $20 \times \frac{3}{5} = 12$
30. $55 \times 3 = 165$
31. $2 \times 30 = 60$
32. (a) $270 / (8 + 1) \times 8 = 240$
(b) $270 / (8 + 1) = 30$
33. (a) $54 \times 4 / (4 + 5) = 24$
(b) $54 \times 5 / (4 + 5) = 30$
34. $(2 \times 43 - 72) = 14$
35. $6 \times (6/4) = 9$
36. 1.28
37. 0.26
38. 7.64
39. 5.34
40. 1.11
41. $1/3$
42. $2/3$
43. $1/2$
44. $1/4$
45. $3/4$
46.
$$\begin{array}{r} 5 \ .2 \ 5 \\ 4 \overline{) 2 \ 1 \ .0} \\ \underline{2 \ 0} \\ 1 \ 0 \\ \underline{8 } \\ 2 \ 0 \\ \underline{2 \ 0} \\ 0 \end{array}$$
- $$\frac{21}{4} = 5.25$$
47. $5.25 = 5 \frac{25}{100} = 5 \frac{1}{4}$
48. $3.75 = 3 \frac{3}{4} = 3 \ 3/4$
49. $\frac{30}{4} = 7.5$
50. $4.44 = 4 \frac{44}{100} = 4 \frac{11}{25} = 4 \ 11/25$
51. $5.15 = 5 \frac{15}{100} = 5 \frac{3}{20} = 5 \ 3/20$
52. $6.64 = 6 \frac{64}{100} = 6 \frac{16}{25} = 6 \ 16/25$
53. $\frac{12}{5} = 2.4$
54. $7.45 = 7 \frac{45}{100} = 7 \frac{9}{20} = 7 \ 9/20$
55. $\frac{13}{4} = 3.25$
56. 646,090,831
57. $1705 - 1252 = 453$
58. $3 \times 21 = 63$
 $2 \times 21 = 42$
GCF(63, 42) = 21
59. $10,000 \div 2,000 = 5$
60. From 203 to 299, there are $50 - 1 = 49$ odd numbers
(Note: 201 is excluded.)
61. 12, 14, ..., 50
Ans = 20 even numbers
62. 500
63. $24 \times 60 \times 60 = 86400$

MAP 245 (T2) Issue 10

64. $992 + 991 = 1983$

65. $30 - 10 = 20$

66. 60

67. 50

68. 6

69. 20

70. 15

71. 7

72. 30

73. 4

74. 18

75. 8

Answer Key

1. 1635
2. 1980
3. 2190
4. 2799
5. 3771
6. 2408
7. A=1, B=2
8. A=2, B=4
9. A=5, B=3
10. A=3, B=7
11. 15
12. 18 & 2 (remainder)
13. 14 & 1 (remainder)
14. 17 & 1 (remainder)
15. 19 & 2 (remainder)
16. $170 - 85 = 85$
17. $7 \times 7 = 49$
18. (a) $8 \times 2 = 16$
(b) $9 \times 2 = 18$
(c) $2 \times 3 = 6$
19. (a) $60 \times (3/4) = 45$
(b) $60 \times (3/4) = 45$
20. $10.00 - 3 \times 2.00 = 4$
21. $(43 + 27) / 2 = 35$
22. D
23. (a) $42 / 6 = 7$
(b) $36 / 9 = 4$
24. (a) 52 (b) 54 (c) J
25. (a) $35 \times (4/7) = 20$
(b) $35 \times (1 - 4/7) = 15$
26. $90 - 59 = 31$
27. $2 \times 10 / 5 = 4$
28. (a) $7 + 2 + 2 = 11$
(b) $7 \times 2 \times 2 = 28$
29. $24 \times \frac{3}{4} = 18$
30. $60 \times 4 = 240$
31. $3 \times 35 = 105$
32. (a) $400 / (9 + 1) \times 9 = 360$
(b) $400 / (9 + 1) = 40$
33. (a) $45 \times 4 / (4 + 6) = 18$
(b) $45 \times 6 / (4 + 6) = 27$
34. $(2 \times 50 - 74) = 26$
35. $5 \times (12/3) = 20$
36. 2.68
37. 7.66
38. 6.84
39. 3.62
40. 2.08
41. 18.67
42. 91.07
43. 87.554
44. 7.116
45. 156.3
46. $1/8$
47. $1/4$
48. $3/8$
49. $5/8$
50. $3/4$
51. $36 \times 7.25 = 36 \times 7 + 9 = 252 + 9 = \underline{\$261}$
52. $35 \times 28 = 7 \times 5 \times 28 = 7 \times 140 = \980
53. $8 + 5 + 2 = 15$

8	2	6
+	6	9
1	5	2
1	5	2
1	5	2
54. $6 + 5 + 1 = 12$

5	3	6
-	3	5
1	8	1
55. B
The least common multiple of 2 and 3 is 6. So, it is 9:06 am
56. 51
57. 9758
Hint: 8 should be reserved for the ones digit.
58. 4321
59. $30 \div 2 = 15$
 $15 - 10 = 5$
 $5 \times 10 = 50$
60. 5
61. 15
62. 7
63. 30
64. 18

MAP 245 (T2) Issue 11

65. 8
66. 40
67. 5

68. 12
69. 60
70. 9

Answer Key

- | | |
|--|---|
| 1. 900 | 35. $6 \times (6/4) = 9$ |
| 2. 1224 | 36. 0.73 |
| 3. 1440 | 37. 4.78 |
| 4. 1974 | 38. 4.33 |
| 5. 2634 | 39. 3.79 |
| 6. 2052 | 40. 0.73 |
| 7. A=2, B=5 | 41. $1/2$ |
| 8. A=5, B=3 | 42. $1/3$ |
| 9. A=2, B=7 | 43. $1/2$ |
| 10. A=1, B=2 | 44. $1/4$ |
| 11. 16 R 2 | 45. $1/5$ |
| 12. 28 R 1 | 46. $\frac{10}{3} = 3\frac{1}{3} = 3\frac{1}{3}$ |
| 13. 13 R 5 | since $10 \div 3 = 3\text{ R }1$. Note that the new denominator remains unchanged. |
| 14. 23 & 1 (remainder) | 47. $16\frac{1}{4} = 16\frac{1}{4}$ |
| 15. 12 R 6 | 48. $12\frac{1}{2} = 12\frac{1}{2}$ |
| 16. $190 - 92 = 98$ | 49. $20\frac{2}{3} = 20\frac{2}{3}$ |
| 17. $7 \times 7 = 49$ | 50. $7\frac{5}{7} = 7\frac{5}{7}$ |
| 18. (a) $9 \times 2 = 18$ | 51. $3\frac{8}{9} = 3\frac{8}{9}$ |
| (b) $3 \times 2 = 6$ | 52. $10\frac{5}{8} = 10\frac{5}{8}$ |
| (c) $3 \times 3 = 9$ | 53. $7\frac{1}{2} = 7\frac{1}{2}$ |
| 19. (a) $60 \times (5/6) = 50$ | 54. $6\frac{1}{6} = 6\frac{1}{6}$ |
| (b) $60 \times (5/6) = 50$ | 55. $7\frac{3}{12} = 7\frac{3}{12}$ |
| 20. $10.00 - 3 \times 3.00 = 1$ | 56. $15 \times 5 = 75$ |
| 21. $(8+10)/2 = 9$ | 57. 15 years old each |
| 22. D | 58. 13 Alex & 14 Ben & 15 Camilla & 16 Derek & 17 Elsa |
| 23. (a) $49/7 = 7$ | 59. $130 - 4 = 126$ |
| (b) $36/6 = 6$ | (a) $126 \div 2 = 63$ (Mia) |
| 24. (a) 53 (b) 39 (c) H | (b) $63 + 4 = 67$ (Nia) |
| 25. (a) $28 \times (5/7) = 20$ | 60. $100 - 4 = 96$ |
| (b) $28 \times (1 - 5/7) = 8$ | (a) $96 \div 2 = 48$ (Mia) |
| 26. $90 - 60 = 30$ | (b) $48 + 4 = 52$ (Nia) |
| 27. $2 \times 10/10 = 2$ | 61. U = 7 |
| 28. (a) $8 + 3 + 3 = 14$ | T = $7 + 3 = 10$ |
| (b) $8 \times 3 \times 3 = 72$ | S = $2 \times 10 = 20$ |
| 29. $24 \times \frac{1}{8} = 3$ | 62. M = $15 - 9 = 6$ (Now) |
| 30. $65 \times 5 = 325$ | N = $3 + 6 = 9$ (Now) |
| 31. $4 \times 40 = 160$ | $9 - 5 = 4$ (Nancy 5 years ago) |
| 32. (a) $330 / (10 + 1) \times 10 = 300$ | 63. (a) $\frac{21+3}{2} = 12$ (D) |
| (b) $330 / (10 + 1) = 30$ | (b) $\frac{21-3}{2} = 9$ (E) |
| 33. (a) $66 \times 4 / (4 + 7) = 24$ | |
| (b) $66 \times 7 / (4 + 7) = 42$ | |
| 34. $(2 \times 55 - 76) = 34$ | |

MAP 245 (T2) Issue 12

64. $18 \div 3 = 6$ five years ago
 $6 + 5 = 11$ now
 $11 + 5 = 16$ in five years
65. $15 - 5 = 10$
 $10 - 3 = 7$ (Nancy, now)
 $7 - 3 = 4$ yrs old
66. 18
67. 8
68. 40

69. 5
70. 12
71. 60
72. 9
73. 50
74. 20
75. 10